

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
25 March 2004 (25.03.2004)

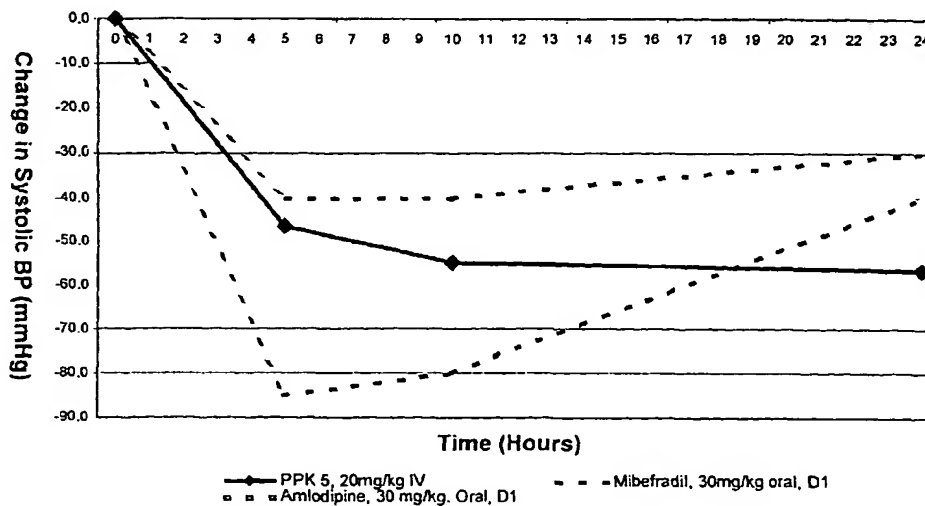
PCT

(10) International Publication Number
WO 2004/024153 A2

- (51) International Patent Classification⁷: A61K 31/4422, A61P 9/12
- (21) International Application Number:
PCT/US2003/028527
- (22) International Filing Date:
11 September 2003 (11.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/410,338 12 September 2002 (12.09.2002) US
60/464,814 21 April 2003 (21.04.2003) US
- (71) Applicant (for all designated States except US): DI-
AKRON PHARMACEUTICALS, INC. [US/US]; 4570
Executive Drive, Suite 100, San Diego, CA 92121 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BIBBS, Jeffrey, A.
[US/US]; 13870 Bruyere Court, San Diego, CA 92129
(US). RAO, Srirama [US/US]; 12132 Oakview Way, San
Diego, CA 92128 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT (util-
ity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (util-
ity model), DE, DK (utility model), DK, DM, DZ, EC, EE
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO,
RU, SC, SD, SE, SG, SK (utility model), SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA,
ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:
— of inventorship (Rule 4.17(iv)) for US only

[Continued on next page]

(54) Title: CALCIUM CHANNEL BLOCKERS



(57) Abstract: The present invention is directed in part towards methods of modulating the function of calcium channels with dihydropyrimidine, dihydropyrimidone, dihydropyrimidinethione, and dihydropyridine compounds. In addition, the invention describes methods of preventing and treating protein kinase-related abnormal conditions in organisms with a compound identified by the invention. Furthermore, the invention pertains to T-channel agonists that have a slow onset of activity and long duration of activity.

BEST AVAILABLE COPY

WO 2004/024153 A2

WO 2004/024153 A2



Published:

— without international search report and to be republished
upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.